

PATENT APPLICATION

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 09/482,896

REMARKS

Claims 1 - 21 were previously pending. Claims 100 - 114 are herein added. Claims 22 - 99 are herein cancelled without prejudice or disclaimer. Accordingly, claims 1-21 and 100- 114 are presently pending in the application.

I. Rejection of Claims 1, 8 and 15 Under 35 U.S.C. § 112, Second Paragraph

Claims 1, 8 and 15 stand rejected under 35 U.S.C. § 112, second paragraph, because the recitation "the improvement" lacks antecedent basis. Applicant has cured this rejection by amending the claims, as shown above in the Listing of Claims. Accordingly, the Examiner is respectfully requested to withdraw this rejection. The amendments do not narrow the scope of the claims or raise any new issues.

II. Rejection of Claims 1 - 21 Under 35 U.S.C. § 102 in View of EP 0 766 202 ("Ito")

Claims 1 - 21 stand rejected under 35 U.S.C. § 102 as allegedly being anticipated by EP 0 766 202("the Ito reference"). This rejection is respectfully traversed as explained below.

Applicant's invention relates to a method, system and computer-readable storage medium for carrying out processing on an image. For example, processing is performed for enhancing a predetermined frequency component of an image signal, wherein the processing is based on the picture element density of the original image. That is, a feature of the present invention is the definition of transformation function parameters on the basis of picture element density of an original image.

PATENT APPLICATION

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 09/482,896

In this vein, independent claims 1, 8 and 15 of the instant invention recite (in paraphrase) that the transformation function parameters *are defined on the basis of the picture element density* of the original image. Notably, at least these features are altogether absent in the Ito reference.

The Ito reference relates to a filtering process as applied to an original image signal. In Ito's process, an original image signal is band-pass filtered a number of times, with each subsequent resultant filtered image containing lesser bandwidth than the previously filtered image. These band-limited filtered image signals are then integrated with an emphasis coefficient by multiplying the band-limited filtered image signals with the emphasis coefficient. The product of this integration is then added back to the original image signal. Further, a dynamic range compressing process is carried out by converting a difference signal, which is obtained by subtracting the integration signal from the original signal image, and adding the converted difference signal to the original image signal. Such processing prevents an artifact from occurring at an edge region of the processed image signal. (*See Abstract and Page 8, lines 5 - 25.*)

Nowhere in the Ito reference, however, is there the disclosure or suggestion of the processing of the image signals being based on the picture element density of the original image. While the instant Office Action (at page 3) compares the above-noted feature of the instant invention to certain portions of the Ito reference, the Examiner's citations (and, indeed, the entire Ito reference) are deficient for failing to teach or suggest the above-noted features of independent claims 1, 8 and 15 of the instant invention.

PATENT APPLICATION

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 09/482,896

More precisely, the Examiner claims that Ito's Abstract somehow discloses the above-noted features. The Examiner further alleges that Ito's Figs. 1, 12 and 43 (including Conversion Means 3) somehow disclose the above-noted features. The Examiner additionally cites to Page 10, lines 53 - 59 and Page 11, lines 1 - 19, as allegedly disclosing the above-noted features. Resoundingly, however, it is respectfully asserted that the Examiner is mistaken, as explained below.

Conversion Means 3 is shown in Figs. 12 and 43 (wherein such figures are merely high-level concept block diagrams). Fig. 1 merely reflects that a filtering process is carried out on an original image signal. Conversion Means 3 is discussed at page 10, lines 32 - 40 and lines 53 - 59; page 23, lines 45 - 59; and page 25, lines 22 - 39.

Succinctly, Conversion Means 3 (and the general processing of the original image signal in Ito) is based on one of functions f_1 to f_N for respective frequency bands for the filtered image signals. As described at the bottom of page 23, the f functions of Conversion Means 3 are entirely arbitrary. That is, not only is the Conversion Means 3 of Ito not based on an original image picture element density, but Conversion Means 3 is absolutely arbitrary. This conclusion is again reiterated at page 25, lines 28 - 31.

To reemphasize, Ito is entirely deficient in teaching or suggesting that the frequency filtered image signals are processed according to parameters *based on the picture element density* of the original image. Accordingly, the Examiner is respectfully requested to reconsider and

PATENT APPLICATION

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 09/482,896

withdraw this rejection, as M.P.E.P. §2131 requires that "the identical invention must be shown in as complete detail as is contained in the . . . claim" for a § 102 rejection to be proper.

III. Dependent Claims

Applicant further posits that the dependent claims (including dependent claims 2 - 7, 9 - 14, 16 - 21 and newly dependent claims 100 - 114) are patentable at least by virtue of their ultimate dependencies upon independent claims 1, 8 and 15 (wherein independent claims 1, 8 and 15 are patentable for reasons explained in Parts I and II of this paper).

IV. Conclusion

As explained above, the instant invention includes structure and features that are altogether absent in the prior art relied upon as the basis for rejection. Accordingly, it is respectfully requested that the Examiner reconsider and withdraw the current rejections.


In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

PATENT APPLICATION

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 09/482,896

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


Jason C. Beckstead
Registration No. 48,232

SUGHRUE MION, PLLC
Telephone: (650) 625-8100
Facsimile: (650) 625-8110

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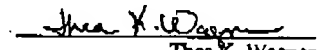
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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this AMENDMENT UNDER 37 C.F.R. § 1.111 is being facsimile transmitted to the U.S. Patent and Trademark Office this 22nd day of January, 2004.


Thea K. Wagner